

**Hardchrome Electro Plating, Inc.**  
**Draft Upland Site Summary**

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**HARDCHROME ELECTRO PLATING, INC. (DAR SITE ID #124)**

Address: 8 Meserole Avenue, Brooklyn, New York 11222  
Tax Lot Parcel(s): Brooklyn Block 2614, Lot 8  
Latitude: 40.725453  
Longitude: -73.957012  
Regulatory Programs/  
Numbers/Codes: USEPA No. NYD002020758, AFS No. 3604703034  
Analytical Data Status: ☐ Electronic Data Available ☒ Hardcopies only  
☐ No Data Available

**1 SUMMARY OF CONSTITUENTS OF POTENTIAL CONCERN (COPCs) TRANSPORT PATHWAYS TO THE CREEK**

The current understanding of the transport mechanisms of COPCs from the upland portions of the Hardchrome Electro Plating, Inc. site (site) to Newtown Creek is summarized in this section and Table 1 and supported in following sections.

**Overland Transport:**

The site is 0.66 mile from Newtown Creek and associated waterways. This is not a complete current or historical pathway.

**Bank Erosion:**

The site is not adjacent to Newtown Creek and associated waterways. This is not a complete current or historical pathway.

**Groundwater:**

The site is 0.66 mile from Newtown Creek and associated waterways and 300 feet from the East River. Information regarding on-site groundwater quality was not identified in documents available for review. According to a U.S. Geological Survey (USGS) water table map for Brooklyn, New York, groundwater beneath is expected to flow west toward the East River (Misut and Monti 1999). This is not a complete current or historical pathway.

**Overwater Activities:**

This site is not adjacent to Newtown Creek or associated waterways. Information regarding overwater activities was not identified in documents available for review. This is not a complete current or historical pathway.

**Stormwater/Wastewater Systems:**

The site is within the Newtown Creek Water Pollution Control Plant (WPCP) sewershed. Stormwater and wastewater discharges from the site flow into a combined municipal sewer system. Information regarding on-site stormwater and wastewater infrastructure and management was not identified in documents available for review. In 1993, NYCDEP issued an industrial waste discharge (IWD) permit to the site. The permit was renewed in 1998 and 2002 (NYCDEP 1993a, 1998a, 2002a). Information regarding more additional permits was not identified in documents available for review. The direct discharge of stormwater and wastewater pathway is not a complete current or historical pathway. When the combined flows exceed the municipal system's capacity, untreated combined sewer overflows (CSOs) are discharged to the East River, which is outside of the Newtown Creek study area. The CSO outfall/wastewater pathway is not a complete current or historical pathway.

**Air Releases:**

The site was listed in the Air Facility System (AFS) database (AFS No. 3604703034) in 1999 for hexavalent chromium (CR6PT). The AFS database indicated that the site was compliant and operating in the chromium electroplating program in June 1999 (USEPA 2012). Additional information regarding air releases from the site was not identified in documents available for review. There is insufficient evidence to make a current or historical pathway determination.

**2 PROJECT STATUS**

Information regarding on-site environmental investigations was not identified in documents available for review. A New York State Department of Environmental Conservation (NYSDEC) Site Code was not found for this site.

### 3 SITE OWNERSHIP HISTORY

Respondent Member:

☐ Yes ☒ No

Owner	Years	Occupant	Types of Operations
Unknown	1888	Vacant	Vacant
	ca. 1905 – ca. 1916	Bulmer Lumber Company	Lumber storage yard
	1916 – unknown	Warner & Stell Wagon Trucking	Unknown
	1942 – unknown	Superior Bearing Bronze Company	Magnesium casting and cleaning
Benne and Sylvia Katz	ca. 1945 – 1953	Hardchrome Electro Processing Corporation/Hardchrome Electro Plating, Inc.	Hard chrome plating, nickel plating, molds, and dyes
Abraham Perlen, Benjamin Perlen, and Sylvia Stabiner	1953 – 1973		
Perlen Company	1973 – 1996		
Murray Shaby	ca. 1983 – ca. 2005	Hardchrome Electro Plating, Inc.	Electroplating
8 Meserole LLC	2005 – present	Unknown	Unknown
	unknown – present	Cbsamerika	Employment agency

Notes:

ca. – circa

Inc. – Incorporated

Discussion and sources provided in Section 6.

### 4 PROPERTY DESCRIPTION

The site occupies approximately 0.14 acre<sup>1</sup> in Brooklyn, New York, and is located approximately 0.66 mile south of Newtown Creek and approximately 300 feet east of the East River. The site is between 5 and 10 feet above mean sea level and site topography gradually slopes to the west as shown on Figure 1. The entire site is covered by a building. The site and adjoining properties are zoned for manufacturing; a residential zone is located to the northwest of the site (NYCDP 2011).

<sup>1</sup> Acreage is an approximation of the site tax parcel using GIS data.

## **5 CURRENT SITE USE**

The site appears to be currently occupied by Cbsamerika, an employment agency (Google 2012).

## **6 SITE USE HISTORY**

In 1888, the site was vacant (Sanborn 1887). By 1905, the Bulmer Lumber Company occupied the site operating a lumber storage yard (Sanborn 1905). In 1916, the site was occupied by Warner & Stell Wagon Trucking (Sanborn 1916). In 1942, the Superior Bearing Bronze Company, a magnesium casting and cleaning operation, leased the site, including a one-story building (Sanborn 1942; The New York Times 1943). Beginning in 1945, Hardchrome Electro Processing Corp. operated at the site until it dissolved as a registered corporation in 1984 (NYSOS 2012).

In 1983, Hardchrome Electro Plating, Inc. registered in New York State as a domestic business corporation and occupied the site until it dissolved as a registered New York State corporation in June 2004 (NYSOS 2012). Hardchrome Electro Plating, Inc. operations involved electroplating and metal finishing.

## **7 CURRENT AND HISTORICAL AREAS OF CONCERN AND COPCs**

The current understanding of the historical and current potential upland and overwater areas of concern at the site are summarized in Table 1. The following sections provide a brief discussion of the potential sources and COPCs at the site requiring additional discussion.

Potential areas of concern at the site include areas in which magnesium casting and cleaning and electroplating processes and operations and lumber storage occurred. COPCs associated with these areas of concern include volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), metals, and chlorinated VOCs.

### **7.1 Uplands**

Hardchrome Electro Plating, Inc. operations involved hard chrome and nickel electroplating and plating with other materials, including stainless steel, aluminum, magnesium, titanium, copper, lead, and precious metal (MacRae's Blue Book 2012). Its operations also included

reducing chrome and neutralizing final wastewater from site operations before discharging to the sewer. In this system, wastewater was first conveyed through a chrome reduction sump tank, secondly through a reaction sump tank, and finally through a neutralization sump tank before discharging to the sewer (Hardchrome Electro Plating, Inc. 1987).

Industrial wastewater discharges from the site are discussed in Section 9.3.

In 1995, an establishment inspection report form indicated the site had four nickel plating tanks, six chromium plating tanks, caustic cleaners, and acidic baths (NYCDEP 1995). The nickel plating tanks had “drop-outs” used for water rinses and overflows were discharged to a trench under the floor. The chromium plating tanks had two rinses that consisted of drums containing sodium metabisulfite; these were not discharged. Wastewater from the trench flowed into a pit that then flowed to another pit where the wastewater was pumped to a treatment holding tank. Wastewater was treated by adding sodium metabisulfite. Sodium hydroxide was used to adjust the pH, and wastewater was then discharged to a third pit that discharged to the housetrap in the basement (NYCDEP 1995).

Hardchrome Electro Plating, Inc. was classified a Resource Conservation and Recovery Act (RCRA) hazardous waste small quantity generator (SQG) in 2007. Records indicate the site was intermittently classified as an RCRA hazardous waste non-generator, an SQG, and a large quantity generator (LQG) between 1980 and 2007 (EDR 2010). Hazardous waste manifests indicate that the site historically handled barium (D005), non-listed corrosive wastes (D002), spent cyanide plating bath solutions from electroplating operations (F007), plating bath residues from the bottom of plating baths from electroplating operations in which cyanides are used in the process (F008), and spent stripping and cleaning bath solutions from electroplating operations in which cyanides are used in the process (F009; EDR 2010; RCRIS 2012).

## **7.2 Overwater Activities**

This site is not adjacent to Newtown Creek or associated waterways. Information regarding overwater activities was not identified in documents available for review.

## **7.3 Spills**

Information regarding on-site spills was not identified in documents available for review.

## 8 PHYSICAL SITE SETTING

Site-specific hydrogeologic information was not identified in documents available for review. The geologic setting for Newtown Creek consists of impermeable Precambrian and Paleozoic crystalline bedrock, overlain by the Upper Cretaceous Raritan formation, Magothy formation and Matawan Group (undifferentiated), unconsolidated Pleistocene deposits and upper Pleistocene glacial deposits and Holocene shore, beach salt-marsh deposits, and alluvium, along with local occurrences of artificial fill (Buxton et al. 1981; Soren and Simmons 1987). The primary areas of groundwater discharge are Newtown Creek and its tributaries and the East River (Misut and Monti 1999). In the vicinity of Newtown Creek, groundwater flow in the Upper Glacial aquifer is generally north and south towards the creek. With increased distance from the creek, groundwater will flow towards the nearest surface waterbody to discharge (Misut and Monti 1999). Incidences of perched groundwater may occur above the Upper Glacial Aquifer in some areas, particularly in formerly low-lying areas that have been filled. Groundwater flow at a specific property may differ from the regional pattern due to pumping for groundwater treatment or dewatering activities (Misut and Monti 1999), the presence of buried utilities, or other preferential pathways.

## 9 NATURE AND EXTENT (CURRENT UNDERSTANDING OF ENVIRONMENTAL CONDITIONS)

### 9.1 Soil

Soil Investigations

☐ Yes ☒ No

Bank Samples

☐ Yes ☐ No ☒ Not Applicable

Soil-Vapor Investigations

☐ Yes ☒ No

Information regarding on-site soil investigations was not identified in documents available for review.

### 9.2 Groundwater

Groundwater Investigations

☐ Yes ☒ No

NAPL Presence (Historical and Current)

☐ Yes ☒ No

Dissolved COPC Plumes

☐ Yes ☒ No

Visual Seep Sample Data

☐ Yes ☐ No ☒ Not Applicable

Information regarding on-site groundwater investigations was not identified in documents available for review.

### 9.3 Surface Water

Surface Water Investigation

☐ Yes ☒ No

SPDES Permit (Current or Past)

☐ Yes ☒ No

Industrial Wastewater Discharge Permit (Current or Past)

☒ Yes ☐ No

Stormwater Data

☐ Yes ☒ No

Catch Basin Solids Data

☐ Yes ☒ No

Wastewater Data

☒ Yes ☐ No

#### 9.3.1 Stormwater and Wastewater Systems

Information regarding on-site stormwater and wastewater infrastructure and management was not identified in files available for review. The site is within the Newtown Creek WPCP sewershed. Stormwater and wastewater discharges from the site flow into a combined municipal sewer system. When the combined flows exceed the system's capacity, untreated CSOs are discharged to the East River, which is outside of the Newtown Creek study area (NYCDEP 2007). It is not known if other direct or private discharge points exist from the site.

#### 9.3.2 Industrial Wastewater Discharge Permit

In 1993, NYCDEP issued an IWD permit to the site. The permit was renewed in 1998 and 2002, as shown in the following table. Information regarding current permits was not identified in files available for review.

Permit Number	Effective Date	Expiration Date
93-P158-1 (NYCDEP 1993a)	09/13/93	09/12/98
98-P158-1 (NYCDEP 1998a)	09/11/98	09/10/03
02-P158-1 <sup>1</sup> (NYCDEP 2002a)	04/16/02	04/15/07

## Notes:

1 - The available file for this IWD permit only includes the front page of the permit (i.e., the description of the permitted discharge points, discharge limitations, and monitoring requirements associated to this permit were not found in available files).

NYCDEP = New York City Department of Environmental Protection

IWD Permit Nos. 93-P158-1 and 98-P158-1 described two permitted discharge points at the site (NYCDEP 1993a, 1998a). Discharge limitations and monitoring requirements for the permitted discharge points were outlined in the both permits. IWD Permit Nos. 93-P158-1 and 98-P158-1 outlined compliance schedules requiring submittal of periodic monitoring reports to demonstrate permit compliance. Monitoring reports located for the site indicate intermittent compliance between 1989 and 1998 (NYCDEP 1989, 1990a, 1990b, 1992a, 1992b, 1993b, 1998b). Details of these monitoring report exceedences and other exceedences found in available files are described further in Section 9.3.3 below.

### 9.3.3 Sampling Data

Documented exceedences of permitted discharge limits are summarized in the following table:

Report Date	Constituent	Result	Unit	Limit	Source
07/28/72	Chromium	20.6	ppm	5 ppm	NYCDEP 1972
	Cyanide	5.9	ppm	0.2 ppm	
10/19/89	Chromium	30.0	ppm	5 ppm	NYCECB 1989
01/06/92	Chromium	36.5	ppm	5 ppm	NYCDEP 1992c
06/16/92	Lead	1.9	ppm	---	NYCDEP 1992b
10/06/92	Lead	1.0	ppm	0.6 ppm	NYCDEP 1992d
01/06/93	Lead	1.8	ppm	0.6 ppm	NYCECB 1993a, 1993b; NYCDEP 1993c
02/18/97	Lead	0.82	ppm	0.6 ppm	NYCDEP 1997
04/24/98	Lead	17.0	ppm	0.6 ppm	NYCDEP 1998b
11/17/98	Lead	1.1	ppm	0.6 ppm	NYCDEP 1999
11/18/98	Lead	1.2	ppm	0.6 ppm	NYCECB 1998, 1999; NYCDEP 1999
12/11/98	Lead	---	---	---	NYCDEP 1998c
01/12/01	pH	4.2	SU	5 < pH < 11	NYCDEP 2001
09/23/02	Lead	0.44	ppm	0.4 ppm <sup>1</sup>	NYCDEP 2002b

## Notes:

1 – Maximum allowable average of daily values for four consecutive monitoring days (NYCDEP 1998a)

--- - Value not specified; however, exceedance indicated

NYCDEP – New York City Department of Environmental Protection

NYCECB – New York City Environmental Control Board

ppm – parts per million

SU – Standard Units

### 9.3.4 Surface Water Summary

Information regarding on-site stormwater and wastewater infrastructure and management was not identified in files available for review. Stormwater and wastewater discharges from the site flow into a combined municipal sewer system that may overflow into the East River (NYCDEP 2007). In 1993, NYCDEP issued an IWD permit to the site. The permit was renewed in 1998 and 2002 (NYCDEP 1993a, 1998a, and 2002a). Information regarding current permits was not identified in files available for review.

## 9.4 Sediment

Creek Sediment Data

☐ Yes ☐ No ☒ Not Applicable

Information regarding sediment investigations was not identified in files available for review.

## 9.5 Air

Air Permit

☐ Yes ☒ No

Air Data

☐ Yes ☒ No

### 9.5.1 Air Permit

No air permits were identified for the site in files available for review; however, the site was listed in the AFS database (AFS No. 3604703034) in 1999 for CR6PT. The AFS database indicated that the site was compliant and operating in the chromium electroplating program in June 1999 (USEPA 2012). Additional information regarding air releases from the site was not identified in files available for review.

## 10 REMEDIATION HISTORY (INTERIM REMEDIAL MEASURES AND OTHER CLEANUPS)

Information regarding on-site remedial activities was not identified in files available for review.

## 11 BIBLIOGRAPHY/INFORMATION SOURCES

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- Misut and Monti (Misut, P.E., and J. Monti, Jr.), 1999. *Simulation of Ground-Water Flow and Pumpage in Kings and Queens Counties, Long Island, New York*. U.S. Geological Survey. Water-Resources Investigations Report 98-4071. 1999.
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- NYCDEP, 1990a. Industrial User Self Monitoring Report. Hardchrome Electro Plating, Inc. September 1, 1990.

- NYCDEP, 1990b. Industrial Wastes Control Section Self Monitoring Report Review Form. Hardchrome Electro Plating, Inc. April 13, 1990.
- NYCDEP, 1992a. Industrial User Self Monitoring Report. Hardchrome Electro Plating, Inc. October 1, 1992.
- NYCDEP, 1992b. Industrial Wastes Control Section Self Monitoring Report Review Form. Hardchrome Electro Plating, Inc. June 16, 1992.
- NYCDEP, 1992c. Commissioner's Order No. 3509. Issued to: Hardchrome Electro Plating, Inc. March 3, 1992.
- NYCDEP, 1992d. Commissioner's Order No. 4854. Issued to: Hardchrome Electroplating, Inc. December 10, 1992.
- NYCDEP, 1993a. Industrial Wastewater Discharge Permit. Issued to: Hardchrome Electro Plating, Inc. Permit No. 93-9158-1. September 13, 1993.
- NYCDEP, 1993b. Industrial User Self Monitoring Report. Hardchrome Electro Plating, Inc. April 1, 1993.
- NYCDEP, 1993c. Commissioner's Order No. 5081. Issued to: Hardchrome Electro Plating, Inc. February 17, 1993.
- NYCDEP, 1995. Enforcement and Compliance Section Establishment Inspection Report Form. Hardchrome Electro Plating, Inc. October 12, 1995.
- NYCDEP, 1997. Commissioner's Order No. 10217. Issued to: Hardchrome Electro Plating, Inc. June 23, 1997.
- NYCDEP, 1998a. Industrial Wastewater Discharge Permit. Issued to: Hardchrome Electro Plating, Inc. Permit No. 98-P158-1. September 11, 1998.
- NYCDEP, 1998b. Monitoring Report. July 7, 1998. [NEWT-0032377]
- NYCDEP, 1998c. Referral of Composite - Verification Sampling. Hardchrome Electro Plating, Inc. December 11, 1998.
- NYCDEP, 1999. Commissioner's Order No. 12376. Issued to: Hardchrome Electro Plating, Inc. February 3, 1999.

- NYCDEP, 2001. Commissioner's Order No. 16111. Issued to: Hardchrome Electro Plating, Inc. March 12, 2001.
- NYCDEP, 2002a. Industrial Wastewater Discharge Permit. Issued to: Hardchrome Electro Plating, Inc. Permit No. 02-P158-1. April 16, 2002.
- NYCDEP, 2002b. Commissioner's Order No. 20783. Issued to: Hardchrome Electro Plating, Inc. November 27, 2002.
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## 12 ATTACHMENTS

### Figures

Figure 1 Site Vicinity Map: Hardchrome Electro Plating, Inc.

### Tables

Table 1 Potential Areas of Concern and Transport Pathways Assessment

Table 1

## Potential Areas of Concern and Transport Pathways Assessment – Hardchrome Electro Plating, Inc.

Potential Areas of Concern	Media Impacted					COPCs														Potential Complete Pathway						
Description of Areas of Concern	Surface Soil	Subsurface Soil	Groundwater	Catch Basin Solids	Creek Sediment	TPH		VOCs		SVOCs	PAHs	Phthalates	Phenolics	Metals	PCBs	Herbicides and Pesticides	Dioxins/Furans	Overland Transport	Groundwater	Direct Discharge – Overwater	Direct Discharge – Storm/Wastewater	Discharge to Sewer/CSO	Bank Erosion	Air Releases		
						Gasoline-Range	Diesel – Range	Heavier – Range	Petroleum Related (e.g., BTEX)																VOCs	Chlorinated VOCs
Processing areas/ equipment used in electroplating processes and operations	?	?	?	?	?	?	?	?	?	√	?	√	?	?	?	√	?	?	--	--	--	--	--	--	?	
Processing areas/equipment used in magnesium casting and cleaning processes and operations	?	?	?	?	?	?	?	?	?	√	?	√	?	?	?	√	?	?	--	--	--	--	--	--	?	

## Notes:

√ – COPCs are/were present in areas of concern having a current or historical pathway that is determined to be complete or potentially complete.

? – There is not enough information to determine if COPC is/was present in area of concern or if pathway is complete.

-- – Current or historical pathway has been investigated and shown to be not present or incomplete.

BTEX – benzene, toluene, ethylbenzene, and xylenes

COPC – constituent of potential concern

CSO – combined sewer overflow

PAH – polycyclic aromatic hydrocarbon

PCB – polychlorinated biphenyl

SVOC – semi-volatile organic compound

TPH – total petroleum hydrocarbon

VOC – volatile organic compound

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- USEPA Sample Locations (Surface and Subsurface)
- Shoreline (NYC Dept. of Information Technology, 2006)
- USGS Nat'l Elev. Dataset 5-foot Contours
- Selected Site Property Boundary
- Neighboring Site Property Boundary

- Outfall Class
- Direct Discharge
  - General
  - Highway Drain
  - Major Stormwater Outfall
  - SPDES
  - Storm Drain

**NOTES:**

1. Outfall Labeling: BB: Bowery Bay; NC(B/Q): Newtown Creek, Brooklyn/Queens; ST: Stormwater.
2. Outfall locations are preliminary, compiled, estimated data based on New York City Department of Environmental Protection (NYCDEP) maps and tabulated data and other resources. Many outfall locations were taken from the New York City Shoreline Survey Program: Newtown Creek Water Pollution Control Plant Drainage Area, NYCDEP, March 31, 2003. Other locations were taken from an excerpt from a similar report from 2008 (the complete report was not included in files available for review). Finally, some outfall locations were inherited from previous Anchor QEA and Newtown Creek Project work. Latitudinal and longitudinal data provided in the 2003 and 2008 NYCDEP reports were rounded to the nearest second. This resulted in potential outfall location discrepancies of up to approximately 200 feet. All outfall locations are currently under field verification.
3. Aerial Photos: New York State Division of Homeland Security and Emergency Services, 2010.
4. Site Boundaries are based on New York City parcels data.
5. Coarse topographic contours are derived from U.S. Geological Survey 10-meter data.

